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EXAMINER	
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ART UNIT	PAPER NUMBER
2464	

NOTIFICATION DATE	DELIVERY MODE
11/13/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTO@SUGHRUE.COM
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Office Action Summary	Application No.	Applicant(s)	
	10/560,306	OZAWA, KAZUNORI	
	Examiner	Art Unit	
	BEN H. LIU	2464	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This is in response to an amendment/response filed on October 1st, 2009.

2. Claims 1, 3, 5-17, and 19-29 have been amended.

3. No claims have been cancelled.

4. No claims have been added.

5. Claims 1-29 are currently pending.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3, 5-17, and 19-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Harrell et al. (U.S. Patent 7,274,661).

For claim 1, Harrell et al. disclose a receiver comprising:

a buffer for temporarily storing data received from a transmission path *(see figure 2, which recite a client media buffer 210 for storing received data)*; and

control means for monitoring an amount of accumulation in said buffer *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*, and

sending a predetermined control signal to the transmission path based on a result of the monitoring *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)* when the amount of accumulation exceeds a predefined threshold or falls short of the threshold *(see column 6 lines 22-45, which recites a plurality of zones corresponding to the media stored in the buffer)*,

wherein said control signal causes data transmission to switch between previously accumulated data at one bit rate *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)*

and data generated by real-time encoding at another bit rate *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered*

by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate).

For claim 2, Harrell et al. disclose a receiver comprising a decoder for retrieving data from said buffer and decoding the retrieved data, wherein said control means controls such that data is received before data in said buffer is exhausted *(see column 6 lines 22-45, which recite a client media buffer that signals the server when media in the buffer drops below various critical levels to prevent the buffer from being exhausted).*

For claims 3 and 17, Harrell et al. disclose a receiver and receiving means comprising:

monitoring means for monitoring a receiving situation from a transmission path *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*; and

control means for sending a predetermined control signal to the transmission path when the receiving situation changes to a predefined situation *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)*,

wherein said control signal causes data transmission to switch between previously accumulated data at one bit rate *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in*

order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)

and data generated by real-time encoding at another bit rate *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate).*

For claims 5 and 19, Harrell et al. disclose a transmitter and transmission method comprising:

an accumulation unit for storing previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then*

it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)

and data generated by real-time encoding as media signals at different rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*;

switching means for receiving a control signal from a transmission path *(see column 3 lines 36-53, which recite a server that receives service adjustments from the receiving media buffer)*, and

retrieving one of the media signals from said accumulating unit and switching a bit rate of the media signal based on the control signal; and means for encoding the retrieved media signal for transmission to the transmission path *(see figure 2 and column 14 lines 4-13, which recite a server that encodes the media stream using a plurality of different coding bit rates based upon the received service adjustment)*.

For claim 6 and 20, Harrell et al. disclose a transmitter and transmission method comprising:

an accumulation unit for storing previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered*

by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*

means for receiving a control signal from a transmission path, switching a file to be retrieved based on the control signal and retrieving a file from said accumulation unit *(see column 3 lines 36-53 and column 14 lines 62-67, which recite receiving a stream prioritization service adjustment at the server that allows switching the audio streams to be retrieved first)*; and

means for encoding the media signal in the retrieved file, for transmission to the transmission line *(see figure 2 and column 14 lines 4-13, which recite a server that encodes the*

media stream using a plurality of different coding bit rates based upon the received service adjustment).

For claims 7 and 21, Harrell et al. disclose a transmitter and transmission method comprising:

an accumulation unit which stores previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)*

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*

converting means for receiving a control signal from a transmission path, and retrieving one of the media signals from said accumulation unit by converting the bit rate based on the control signal; and means for encoding the media signal retrieved from said converting means for transmission to the transmission path *(see figure 2 and column 14 lines 4-13, which recite a server 202 that encodes the media stream using a plurality of different coding bit rates based upon the received service adjustment)*.

For claims 8 and 22, Harrell et al. disclose a transmitter and transmission method comprising:

an accumulation unit which stores previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)*

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because*

the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)

means for reading and delivering the media signals from said accumulation unit based on a control signal received from a transmission path, at time intervals different from time intervals at which the media signal were encoded *(see column 3 lines 36-53, which recite a server that receives a service adjustment control signal that includes packet retransmission requests for delivering packets a different time than the time of encoding).*

For claims 9 and 23, Harrell et al. disclose a transmission/reception system and method comprising a transmitter for transmitting a media signal to a transmission path, and a receiver for receiving a media signal through the transmission path from said transmitter, wherein:

said receiver comprises:

a buffer for temporarily storing the media signal from said transmitter *(see figure 2, which recite a client media buffer 210 for storing received data)*;

monitoring means for monitoring an amount of accumulation in said buffer *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*; and

control means for sending a control signal to the transmission path *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)* when the amount of accumulation exceeds a predefined threshold or falls short of the threshold *(see column 6 lines 22-45, which recites a plurality of zones corresponding to the media stored in the buffer)*, and

said transmitter comprises:

an accumulation unit for storing previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)*

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*; and

means for receiving the control signal sent from said receiver to the transmission path retrieving one of the media signals from said accumulating means by switching the bit rate based on the control signal *(see figure 2 and column 14 lines 4-13, which recite a server that encodes*

the media stream using a plurality of different coding bit rates based upon the received service adjustment).

For claims 10 and 24, Harrell et al. disclose a transmission/reception system and method comprising a transmitter for transmitting a media signal to a transmission path, and a receiver for receiving a media signal from said transmitter through the transmission path, wherein:

said receiver comprises:

a buffer for temporarily storing the media signal from said transmitter *(see figure 2, which recite a client media buffer 210 for storing received data)*;

monitoring means for monitoring an amount of accumulation in said buffer *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*; and

control means for sending a control signal to the transmission path *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)* when the amount of accumulation exceeds a predefined threshold or falls short of the threshold *(see column 6 lines 22-45, which recites a plurality of zones corresponding to the media stored in the buffer)*, and

said transmitter comprises:

an accumulation unit for storing files in which previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer;*

because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*;

means for receiving the control signal sent from said receiver to the transmission path, switching a file to be retrieved based on the control signal *(see column 3 lines 36-53 and column 14 lines 62-67, which recite receiving a stream prioritization service adjustment at the server that allows switching the audio streams to be retrieved first)*, and

retrieving the file from said accumulating means and means for encoding a media signal in the retrieved file for transmission to the transmission path *(see figure 2 and column 14 lines 4-13, which recite a server that encodes the media stream using a plurality of different coding bit rates based upon the received service adjustment)*.

For claims 11 and 25, Harrell et al. disclose a transmission/reception system and method comprising a transmitter for transmitting a media signal to a transmission path, and a receiver for receiving a media signal from said transmitter through the transmission path, wherein:

said receiver comprises:

monitoring means for monitoring a receiving situation on the transmission path *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*; and

control means for sending a control signal to the transmission path when the receiving situation changes to a predefined situation *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)*, and

said transmitter comprises:

an accumulation unit for storing files in which previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)*

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*;

means for receiving the control signal sent from said receiver to the transmission path, switching a file to be retrieved based on the control signal *(see column 3 lines 36-53 and column 14 lines 62-67, which recite receiving a stream prioritization service adjustment at the server that allows switching the audio streams to be retrieved first)*,

and retrieving the file from said accumulating means; and means for encoding the media signal in the retrieved file for transmission to the transmission path *(see figure 2 and column 14 lines 4-13, which recite a server that encodes the media stream using a plurality of different coding bit rates based upon the received service adjustment)*.

For claims 12 and 26, Harrell et al. disclose a transmission/reception system and method comprising a transmitter for transmitting a media signal to a transmission path, and a receiver for receiving a media signal from said transmitter through the transmission path, wherein:

said receiver comprises:

monitoring means for monitoring an amount of accumulation in a buffer for storing a media signal *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*; and

control means for sending a control signal to the transmission path when the amount of accumulation exceeds a predefined threshold or falls short of the threshold *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)*, and

said transmitter comprises:

an accumulation unit for storing previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)*

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*;

converting means for receiving the control signal sent from said receiver to the transmission path, and retrieving a media signal from said accumulating means by converting a bit rate based on the control signal and means for encoding the retrieved media signal for transmission to the transmission path *(see figure 2 and column 14 lines 4-13, which recite a server 202 that encodes the media stream using a plurality of different coding bit rates based upon the received service adjustment).*

For claims 13 and 27, Harrell et al. disclose a transmission/reception system and method comprising a transmitter for transmitting a media signal to a transmission path, and a receiver for receiving a media signal from said transmitter through the transmission path, wherein:

said receiver comprises:

monitoring means for monitoring a receiving situation on the transmission path *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*; and

control means for sending a control signal to the transmission path when the receiving situation changes to a predefined situation *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)*, and

said transmitter comprises:

an accumulation unit for storing previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the*

compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*;

converting means for receiving the control signal sent from said receiver to the transmission path, and retrieving the media signal from said accumulating means with converting a bit rate based on the control signal and means for encoding the retrieved media signal for transmission to the transmission path *(see figure 2 and column 14 lines 4-13, which recite a server 202 that encodes the media stream using a plurality of different coding bit rates based upon the received service adjustment)*.

For claims 14 and 28, Harrell et al. disclose a transmission/reception system and method comprising a transmitter for transmitting a media signal to a transmission path, and a receiver for receiving the media signal from said transmitter through the transmission path, wherein:

said receiving means comprises:

monitoring means for monitoring an amount of accumulation in a buffer for storing the media signal *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*; and

control means for sending a control signal to the transmission path when the amount of accumulation in the buffer exceeds a predefined threshold or falls short of the threshold *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)*, and

said transmitter comprises:

an accumulation unit for storing previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)*

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits*

per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate);

means for receiving the control signal sent from said receiver to the transmission path, reading and delivering a media signal stored in said accumulating means based on the control signal from said accumulating means at time intervals different from time intervals at which the media signal was encoded *(see column 3 lines 36-53, which recite a server that receives a service adjustment control signal that includes packet retransmission requests for delivering packets a different time than the time of encoding)*; and

means for encoding the delivered media signal for transmission to the transmission path *(see figure 2 and column 14 lines 4-13, which recite a server 202 that encodes the media stream using a plurality of different coding bit rates based upon the received service adjustment)*.

For claims 15 and 29, Harrell et al. disclose a transmission/reception system and method comprising a transmitter for transmitting a media signal to a transmission path, and a receiver for receiving the media signal from said transmitter through the transmission path, wherein:

said receiver comprises:

monitoring means for monitoring a receiving situation on the transmission path *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*; and

control means for sending a control signal to the transmission path when the receiving situation changes to a predefined situation *(see column 3 lines 39-48, which recite transmitting*

service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level), and

said transmitter comprises:

an accumulation unit for storing previously accumulated data *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)*

and data generated by real-time encoding as media signals at different bit rates *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate)*;

means for receiving the control signal sent from said receiver to the transmission path, and reading and delivering a media signal stored in said accumulating means from said

accumulating means based on the control signal at time intervals different from time intervals at which the media signal was encoded *(see column 3 lines 36-53, which recite a server that receives a service adjustment control signal that includes packet retransmission requests for delivering packets a different time than the time of encoding)*; and

means for encoding the delivered media signal for transmission to the transmission path *(see figure 2 and column 14 lines 4-13, which recite a server 202 that encodes the media stream using a plurality of different coding bit rates based upon the received service adjustment).*

For claim 16, Harrell et al. disclose a reception method comprising the steps of:

monitoring an amount of accumulation in a buffer for storing a media signal received from a transmission path *(see column 3 lines 36-39, which recite the detecting a plurality of levels of network congestion by monitoring the buffer level)*;

sending a predetermined control signal to the transmission path *(see column 3 lines 39-48, which recite transmitting service adjustments to the media servers in response to the congestion levels detected by monitoring the buffer level)* when the amount of accumulation in the buffer exceeds a predefined threshold or falls short of the threshold *(see column 6 lines 22-45, which recites a plurality of zones corresponding to the media stored in the buffer)*;

and carrying out a control such that data is received before data in said buffer is exhausted *(see column 6 lines 22-45, which recite a client media buffer that signals the server when media in the buffer drops below various critical levels to prevent the buffer from being exhausted)*,

wherein said control signal causes data transmission to switch between previously accumulated data at one bit rate *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67,*

column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is higher than the selected lower-bit-rate, the number of bits expended for the compressed playback stream, in order to quickly fill the receiving buffer; because the amount of bits transmitted, as indicated by metering rate 502, 602, is higher than the selected lower-bit-rate used for encoding and playback as indicated by bit-rate 518, the data must be previously accumulated; if the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate)

and data generated by real-time encoding at another bit rate *(see column 8 lines 58-67, column 9 lines 1-14, 21-40, 51-67, column 10 lines 26-67, column 11 lines 37-50 and figures 5-6, which recite transmitting data at a metering rate, the total number of bits per second delivered by the server, that is equal to the to the selected higher-bit-rate; because the amount of bits transmitted, as indicated by metering rate 502, 602, matches the selected higher-bit rate used for encoding and playback as indicated by lines 520, 604, the higher-bit-rate represents real-time encoding at the higher-bit-rate).*

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrell et al. (U.S. Patent 7,274,661) as applied to claims 1 and 17 respectively, and in view of Wang et al. (U.S. Patent Application Publication 2004/0186877).

For claims 4 and 18, Harrell et al. disclose all the subject matter of the claimed invention with the exception wherein a predetermined control signal is sent to the transmission path when a predefined situation occurs wherein the predefined situation is a radio handover. However, Wang et al. from the same or similar fields of endeavor teaches a method and system for multimedia streaming wherein a receiver sends an RTCP report to a sender *(see abstract)*. The RTCP report provides receiver buffer fullness level information used to adjust the transmission rate of the sender *(see abstract and figure 2)*. Such an adjustment occurs during packet transfer rate drops during handover situations *(see paragraph 56)*. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the RTCP report to control the transmission rate of a sender during handover situations as taught by Wang et al. with the receiver that sends a predetermined control signal to the transmission path when the receiving situation changes to a predefined situation as taught by Harrell et al. The RTCP report to control the transmission rate of a sender during handover situations can be implemented by configuring

the sender and receiver as taught by Harrell et al. to conform to the Real-Time Control Protocol (RTCP) standard while using a modified RTCP report packet as taught by Wang et al. The motivation for using the RTCP report to control the transmission rate of a sender during handover situations as suggested by Wang et al. with the receiver that sends a predetermined control signal to the transmission path when the receiving situation changes to a predefined situation is to improve the performance of the system by providing actual buffer fullness levels to eliminate the server's assumptions that may be incorrect *(see paragraph 6)*.

Response to Arguments

11. It is noted with appreciation that the Applicant has carefully considered the previous office action and the cited prior art. With the amendment submitted October 1st, 2009, the Applicant has amended claims 1, 3, 5-17, and 19-29. Newly amended claims 1-3, 5-17, and 19-29 are currently rejected under 35 U.S.C. 102(e) as being anticipated by Harrell et al. (U.S. Patent 7,274,661). Further, claims 4 and 18 are currently rejected under 35 U.S.C. 103(a) as being unpatentable over Harrell et al. (U.S. Patent 7,274,661) as applied to claims 1 and 17 respectively, and in view of Wang et al. (U.S. Patent Application Publication 2004/0186877).

It is respectfully submitted that Harrell et al. disclose a metering rate that refers to the total number of bits per second delivered by the server *(see columns 8 lines 58-67, column 9 lines 1-14, column 11 lines 37-50 and figures 5-6)*. Harrell et al. further disclose a bit rate that refers to the number of bits per second that is encoded by the transmitter and subsequently expended for playback by the receiver *(see columns 8 lines 4-34, 58-67, column 9 lines 1-14, column 11 lines 37-50 and figures 5-6)*. The metering rate, as represented by lines 502, 602 in

figures 5-6, varies based upon the available bandwidth as well as various control indicators and signals *(see column 9 lines 51-63 and figures 5-6)*. The bit rate also varies by selecting a lower-bit-rate (i.e., 400 kbps as represented by line 518) or higher-bit-rate (i.e., 1.1.1 Mbps as represented by line 520, 604) *(see column 10 lines 26-64 and figures 5-6)*. When the metering rate is higher than the lower-bit-rate encoding (see figure 5-6, which recite metering line 502 and 602 above encoding rate 518), the stream is being transmitted faster than the stream is being encoded. Thus, when the metering rate is higher than the lower-bit-rate encoding, the transmitted data must be previously accumulated. If the data was not previously accumulated, and instead encoded in real time, then it would be impossible to transmit more data than is being encoded at the selected lower quality bit rate. When the metering rate rises to match the higher-bit-rate (see figures 5-6, which recite metering line 502 and 602 that reaches higher-bit-rate 520 and 604, respectively), then the stream is transmitted at the same rate that the stream is encoded by the transmitter and subsequently decoded by the receiver for playback, thus representing real-time encoding. Therefore, it is respectfully submitted that Harrell et al. disclose the limitation that control signals cause data transmission to switch between previously accumulated data at one bit rate and data generated by real-time encoding at another bit rate at an accumulation unit as recited by the amended claims.

The applicant further argues that dependent claims 4 and 18 are patentable by virtue of their dependencies. In consideration of the newly rejected independent claims, dependent claims 3-12 and 14 have not been found to be allowable.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BEN H. LIU whose telephone number is (571)270-3118. The examiner can normally be reached on 9:00AM to 6:30PM.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art Unit 2464

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